

CLAIMS

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1. A method of making a wall of a liquid crystal cell, comprising imparting a property to a layer of a material on the wall, said property being that liquid crystal molecules placed on the material on the wall in use of the cell adopt a preferred alignment,
- 5 the method comprising exposing the material to unpolarised or circularly polarised radiation from an oblique direction,
- wherein the said property further includes imparting a preferred tilt as well as
- 10 a preferred azimuthal alignment to such liquid crystal molecules.
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2. A method according to Claim 1, wherein the irradiation energy (measured normal to the radiation) is less than 2 J/cm^2 .
3. A method according to Claim 1 or 2, wherein the radiation is ultraviolet.
4. A method according to any preceding claim, wherein said preferred alignment
- 15 is such that the longitudinal axis of the liquid crystal molecules is in the plane including the normal to the layer and the direction of the radiation.
5. A method according to any preceding claim, wherein the imparted preferred tilt exceeds 45° to the plane of the layer.
6. A method according to Claim 5, wherein the imparted preferred tilt
- 20 exceeds 75° .
7. A method according to any preceding claim, wherein the said material is substantially homeotropically orienting.
8. A method according to any preceding claim, wherein the angle of incidence ϕ of the radiation to the normal to the layer is within the range $5^\circ \leq \phi < 70^\circ$.
- 25 9. A method according to any preceding claim, wherein the angle of incidence $\phi > 45^\circ$.
10. A method according to any preceding claim, wherein the material is cross-linked by the irradiation.
11. A method according to any preceding claim, wherein the radiation to which
- 30 the material is exposed is zonewise patterned, whereby, in said imparted property, the preferred alignment is zonewise patterned.
12. A method according to claim 11, wherein, between the source of the radiation and the material, there is interposed a microelement array.
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13. A liquid crystal cell wall bearing a layer of material, the layer having the property that liquid crystal molecules placed on the layer adopt a preferred alignment, to which layer the property was imparted by a method according to any preceding claim.

- 5 14. A liquid crystal cell of which at least one wall in contact with liquid crystal material is according to claim 13.
15. A liquid crystal cell according to claim 14, which is vertically aligned nematic.
16. A liquid crystal cell according to claim 14, which is hybrid aligned nematic.

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